

# ANDREWS MECHANICAL, INC.

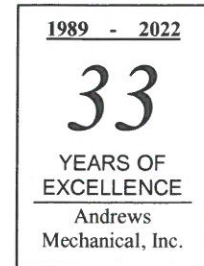
2727 North Madelia Unit 8 (Shop & ship to address)

1503 East Wabash (Mailing address)

Spokane, Washington 99207

Office (509) 489-3860

Fax (509) 489-6140



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Dear members of the State Building Code Council. I would ask not to approve or move forward with 064 and 065 heat pump mandates here are 11 reasons why not to approve.

1. This would violate RCW19.27.020 (1) To require **minimum performance standards and requirements for construction materials**, with accepted standards of engineering, fire and life safety. (4) **To eliminate restrictive, obsolete, conflicting, duplicating and unnecessary regulations and requirements which could unnecessarily increase construction costs or retard the use of new materials and methods of installation or provide unwarranted preferential treatment to types or classes of materials or products or methods.**
2. The current power output is not available for this extra load. There have not been any power plants put online in the last 5 years if fact power plants have been shut down making less power being made then before. So how does one ask for more power to use with less then you have before?
3. The electrical grid can't handle this kind of extra load we are already having brown outs. Which if happen in extreme cold weather conditions would kill many people like what happened in Texas. The exist power supply wiring and poles from power plants cannot handle the extra load and will not for the next 50 years.
4. By increasing the electric load is going to require massive overhaul of the electrical system causing electrical rates to go from .10 cent kilowatt to over .30 cent a kilowatt causing your power bill to be more than your rent payment or house payment. This has already happened in California. Where are people going to get this type of money?
5. Cost of \$450,000.00 study sponsored by Alex Ramel to convert Western Washington University to green energy came back that this is not possible without the use of Natural gas being used. Which would cost \$500,000,000.00 to convert the campus, that is just one college campus. Still requires natural gas. To protects the students and worker community.
6. The heat pump refrigerant that are being used now to run the heat pumps has a global warming coefficient of 2000 where Natural gas is only 80 and when burned is 1. The release of this refrigerant would cause and is causing global warming at a much greater rate then Natural gas. If you look when this warming started this coincides with the change to this new refrigerant which holds heat 2000 times more than combustion product of

Natural gas. The refrigerant R410A which is used in most heat pumps today was also used in spray cans, was when 1<sup>st</sup> produced was not required to be reclaimed in fact, we were told that it posed no harm to the environment and was even sold at Costco stores to everyone. So, billions of pounds were released to the atmosphere with no thought there was a problem because the government said it was safe. Barack Obama was president in 2010 when R410A came in use. Remember this Refrigerant R410A, this was to take care of all the problems we had before with the R22. The Government said No need to reclaim this refrigerant. My Company didn't listen to government and reclaim the refrigerant even back then. You must remember when you release R410A refrigerant to the atmosphere through a leak in a heat pump system or when a spray can is used. This refrigerant will be in our atmosphere for at least 30 years. So, when I think this council wants to require heat pumps for our state, it just makes me shutter that we are going have to put up with 30 more years of this refrigerant. After the heat pump is put out of service.

7. Natural gas is the only fossil fuel that is lighter than air and thus is released from the earth every day 24 hours per day and since from at least 2000 years ago. When Natural gas is released its global warming potential is 80 but when burned is only 1. Remember there is no way to stop this release it happens in are lakes, rivers, and all over the ground. Native Americans tell us about fire on top of the water this is natural gas burning. So, there is no way to stop this release from happening other then burning it and using it and dropping its combustion product which global warming potential to 1. So, I ask you which is better a Global warming potential of 80 or 1? You must remember as the oil and coal are under the earth which will not vent to the atmosphere as natural gas does which is better to use? Then one last thought is when all this oil and coal which is under the earth and the earth always' s try to fill in any gaps in the earth, which is under extreme pressure and temperature what do think will happen to the coal and oil under extreme pressure and temperature? Well, I will tell you it will start to gas off, some of it will gas off and become Natural gas. It is physics, and you can't change physics.
8. The use of heat pumps in the summer is going to cause global warming, with the heat that is rejected from buildings to outside from the inside of buildings. Why do you think summers are much hotter. It due to with us removing the heat from our buildings and dumping to the outside. It no wonder why Seattle area is getting so hot everyone downtown is rejecting there building heat to the outside. So, if it 100 degrees outside, the building is rejecting some where from 120 degrees to 130 degrees to the outside from these heat pumps and A/C.
9. These code changes are going to make any affordability of homes out the door for housing due to cost to install heat pumps, then maintain them and finally the replacement in a 50-year cycle to double the cost of a natural gas equipment and A/C unit.
10. Most people don't like heat pump heat in cold climates due to drafty feeling that you get from them. The heat pump must run long times at much lower temperatures of supply's air then gas, oil or wood heat. Which make them feel drafty. When you have air temperature below you body temperature it will feel drafty to you. Heat pumps run well below your body temperature in the cold part of winter when your body is asking for warm air, so your body is not heating your house. It is like on cold winter day,

and you sit in front of window, the heat from your body wants to go to the outside due to physics, warm goes to cold.

11. With the CO<sub>2</sub> that is part of the combustion product of Natural gas roughly 9% of the combustion product being CO<sub>2</sub> with water vapor being most of the combustion product and some oxygen. Now that you have about 9% CO<sub>2</sub> coming out of the combustion product it gives enough CO<sub>2</sub> that you make products listed below. It takes much more air with CO<sub>2</sub> when your only at 405PPM CO<sub>2</sub> to make these products. There are companies like the 12 Company making products from that CO<sub>2</sub> like door panels in Mercedes Benz cars, eye glass lens and frames and jet fuel. Thus, reducing CO<sub>2</sub> in the atmosphere. Natural gas is not the problem. Please don't limit natural gas appliances when we have companies like 12 Company that are providing means to remove CO<sub>2</sub> from the atmosphere. As soon as the 12 company gears up, CO<sub>2</sub> will leave the atmosphere in much greater volumes.

Edwin "Larry" Andrews II  
President.  
Andrews Mechanical, Inc.  
2727 N. Madelia unit 8  
Spokane, WA 99207

